

THE “TRAIN HORN” RULE

Summary of the Interim Final Rule

1. Overview:

- Announcing publication December 18, 2003, of the Interim Final Rule on Use of Locomotive Horns at Highway-Rail Grade Crossings. Purposes:
 - ⇒ Ensure a high level of public safety;
 - ⇒ Respond to the many communities that have continued to press for relief from unwanted horn noise; and
 - ⇒ Take into consideration the interests of localities with *existing* whistle bans.
- Currently use of the horn at highway-rail crossings is governed by state law and railroad operating rules. When this rule is effective, it will determine when the horn is sounded at public crossings (and private crossings within “quiet zones”).
- This Interim Final Rule was mandated by law¹, and was issued by the Federal Railroad Administration (FRA) after review of almost 3,000 public comments on the Notice of Proposed Rulemaking (NPRM) (65 FR 2230) and the Draft Environmental Impact Statement published January 13, 2000.
- The rule requires that the locomotive horn be sounded at public highway-rail crossings, but provides several exceptions to that requirement.
- Local public authorities may establish, or request the approval of, quiet zones in which train horns may not be routinely sounded. The details for establishment of quiet zones differ depending on the type of quiet zone to be created (Pre-Rule or New) and the type of safety improvements implemented (if required).
- Horns may continue to be silenced at Pre-Rule Quiet Zones, provided certain actions are taken.
- By law, the rule may not go into effect until December 18, 2004.
- Because FRA has made numerous important changes in response to public input, FRA will receive additional comments on this interim final rule. That process should not delay implementation of the rule.

2. Requirement to sound the locomotive horn:

¹49 U.S.C. 20153.

- Outside of quiet zones, railroads must sound the horn 15-20 seconds prior to arrival at the crossing, but not more than 1/4 mile in advance of the crossing.

Note: Most State laws and railroad rules currently require that the horn be sounded for 1/4 mile in advance of the crossing. Under the rule, for trains running at less than 45 mph, this will reduce the time and distance over which the horn is sounded. This will reduce noise impacts on the local community.

- The pattern for sounding the horn will remain as it currently exists today (two long, one short, one long repeated or prolonged until the locomotive traverses the crossing).
- Locomotive engineers will retain the latitude to vary this pattern where crossings are closely spaced; and they will also be empowered to sound the horn in the case of an emergency, even in a quiet zone.
- The rule addresses use of the horn only with respect to highway-rail crossings. Railroads remain free to use the horn for other purposes as prescribed in railroad operating rules on file with FRA, and railroads must use the horn as specified in other FRA regulations (in support of roadway worker safety and in the case of malfunctions of highway-rail warning devices).
- The rule prescribes both a minimum and **maximum** sound level for the train horn. The minimum level is retained at 96db(A), and the new maximum will be 110 db(A). This range will permit railroads to address safety needs in their operating territory (see discussion in the preamble).
- The protocol for testing the horn will be altered to place the sound-level meter at a height of 15 feet above top of rail, rather than the current 4 feet above the roadbed.

Note: The effect of this change will be to permit center-mounted horns to be “turned down” in some cases. The previous test method was influenced by the “shadow effect” created by the body of the locomotive to indicate a lower sound level than would otherwise be expected several hundred feet in front of the locomotive (where the crossing and approaching motorists are located or found).

- The effect of these changes will be to reduce horn noise for 3.4 million of the 9.3 million people currently affected by train horn noise.

3. Creation of quiet zones:

- The rule provides significant flexibility to create quiet zones, both where there are existing whistle bans and in other communities, as well.
- The Interim Final Rule adds a new concept that permits implementation of quiet zones in low-risk situations without the necessity to add safety improvements.
 - ✓ This concept utilizes a risk index approach that estimates expected safety outcomes (that is, the likelihood of a fatal or non-fatal casualty at a crossing).
 - ✓ Risk may be averaged over crossings in a proposed quiet zone.
 - ✓ Average risk within the proposed quiet zone is then compared with the average risk at gated train horn crossings nationally (the “National Significant Risk Threshold” or “NSRT”). FRA will compute the NSRT annually.

The effect of this approach is that horns can remain silenced in over half of Pre-Rule Quiet Zones without significant expense; and many New Quiet Zones can be created without significant expense where flashing lights and gates are already in place at the crossings.

- If the risk index for a proposed New Quiet Zone exceeds the NSRT, then supplementary or alternative safety measures must be used to reduce that risk (to fully compensate for the absence of the train horn or to reduce risk below the NSRT).
- The interim final rule—
 - ✓ Retains engineering solutions known as “supplementary safety measures” for use without FRA approval.
 - ✓ Adds explicit flexibility for adaptation of “supplementary safety measures” to receive credit as “alternative safety measures.” For instance, shorter channelization arrangements can be used with reasonable effectiveness estimates.

- ✓ Continues education and enforcement options, including photo enforcement, subject to verification of effectiveness.²
- The public authority responsible for safety and maintenance of the roadway that crosses the railroad tracks is the only entity that can designate or apply for quiet zone status.
- FRA will provide a web-based tool for communities to use in performing “what if” calculations and preparing submissions. The tool may be found at <http://www.fra.dot.gov>.
- In order to ensure proper application of the risk index, the National Highway-Rail Crossing Inventory must be updated by States and railroads. In the absence of timely filings by those parties, local authorities may file updated inventory information, and railroads must cooperate in providing railroad-specific data.
- FRA regional personnel will be available to participate in diagnostic teams evaluating options for quiet zones.
- Once a quiet zone is established (including the continuation of Pre-Rule Quiet Zones pending any required improvements), the railroad is barred from routine sounding of the horn as a warning at the affected crossings.
- See below for discussion of **Pre-Rule Quiet Zones** and **New Quiet Zones**.

²The rule neither approves nor excludes the possibility of relying upon regional education and enforcement programs with alternative verification strategies. FRA is providing funding in support of an Illinois Commerce Commission-sponsored regional program. The law provides authority for use of new techniques when they have been demonstrated to be effective.

Horns may continue to be silenced at Pre-Rule Quiet Zones if–

- ⇒ The average risk at the crossings is less than the NSRT; or
- ⇒ The average risk is less than twice the NSRT and no relevant collisions have occurred within the past 5 years; or
- ⇒ The community undertakes actions to compensate for lack of the train horn as a warning device (or at least to reduce average risk to below the NSRT).

Train horns will not sound in existing whistle ban areas if authorities state their intention to maintain “Pre-Rule Quiet Zones” and do whatever is required (see above) within **5 years** of publication (**8 years** if the State agency provides at least some assistance to communities in that State).

A “Pre-Rule Quiet Zone” is a quiet zone that contains one or more consecutive grade crossings subject to a whistle ban that has been actively enforced or observed as of October 9, 1996 and December 18, 2003.

To secure Pre-Rule Quiet Zone status, communities must file a notice with FRA within 1 year of publication and a plan within 3 years of publication (if improvements are required).

New Quiet Zones may be created if–

- ⇒ All public crossings are equipped with flashing lights and gates; and either–
 - After adjusting for excess risk created by silencing the train horn, the average risk at the crossings is less than the NSRT; or
 - Safety improvements are made that will compensate for loss of the train horn as a warning device (or at least to reduce average risk to below the NSRT).

Detailed instructions for establishing or requesting recognition of a quiet zone are provided in the regulation.

4. **Length of quiet zones:**

- Generally, a quiet zone must be at least ½ mile in length and may include one or more crossings.
- Pre-Rule Quiet Zones may be retained at their present length as of the date of publication of the rule, even if less than ½ mile. A Pre-Rule Quiet Zone that is greater than ½ mile may be reduced in length to no less than ½ mile and retain its pre-rule status. However, if its length is increased from pre-rule length, pre-rule status will not be retained.

5. **Supplementary and alternative safety measures:**

- Supplementary safety measures are engineering improvements that clearly compensate for the absence of the train horn. If employed at every crossing in the quiet zone, they automatically qualify the quiet zone (subject to reporting requirements).
 - ✓ Temporary closure used with a nighttime-only zone;
 - ✓ Four-quadrant gates;
 - ✓ Channelization arrangements (i.e., non-mountable curb or mountable curb with delineators) at least 100 feet in length on each side (60 ft. where there is an intersecting roadway);
 - ✓ One-way street with gate across the roadway.
- Alternative safety measures may be applied such that the combination of measures at one or more crossings reduces the average risk by the required amount across the quiet zone (so-called “corridor approach”).
 - ✓ Any supplementary safety measure or reasonable variation of a supplementary safety measure (e.g., barrier gate and median with higher estimate of effectiveness; shorter channelization with reduced estimate of effectiveness);
 - ✓ Education and/or enforcement programs (including photo enforcement) with verification of effectiveness; or
 - ✓ Combination of the above.

6. Recognition of the automated wayside horn:

- The rule authorizes use of the automated wayside horn at any crossing with flashing lights and gates (inside or outside a quiet zone) as a one-to-one substitute for the train horn.
- Certain technical requirements apply, consistent with the successful demonstrations of this technology.
- The Federal Highway Administration (FHWA) may treat wayside horns as traffic control devices. Communities interested in employing this option should contact FHWA to determine the need for an experimental designation.

7. Special circumstances:

- A community or railroad that views the provisions of the rule inapplicable to local circumstances may request a waiver from the rule.
- A railroad or community seeking a waiver must first consult with the other party and seek agreement on the form of relief, but if agreement cannot be achieved the party may still request the relief.
- FRA grants waivers if in the public interest and consistent with the safety of highway and railroad users of the crossings.

8. Further proceedings on the rule:

- Because FRA has made numerous changes from the proposed rule in order to respond to public comments, FRA is providing an additional, brief opportunity for comment.
- Comments will be accepted through February 17, 2004, (first business day following the Federal holiday on Monday).
- FRA anticipates that the rule will be effective, with any warranted adjustments, on December 18, 2004.

Additional information, including the full text of the Interim Final Rule, the Final Environmental Impact Statement, and background documents, are available at <http://www.fra.dot.gov>.